

SPECIFICATION

Please amend the specification as follows:

Please replace the fourth full paragraph beginning on Page 2 with the following:

The present invention provides a method and an apparatus for reducing scan power consumption when unloading and restoring content of a processor. The processor has one or more scan chains. First, at least one scan chain is partitioned into a plurality of segments comprising one or more segments of a predetermined length and an offset segment. ~~Second, one of the segments is scanned at a time.~~ Enough clocking is provided to scan all bits in the plurality of segments. The processor keeps track of the predetermined length, an order of the segments, and the offset segment. All of the plurality of segments are scanned one segment at a time.

Please replace the first full paragraph beginning on Page 7 with the following:

The master controller 102, which is in charge of the whole data store and retrieval process, has control of the scan clock SCANCLK[0:m-1], assuming that the chip has m scan chains. Each scan clock signal of the SCANCLK bus controls the corresponding scan clock of that scan chain. If the signal SYSTEM_TESTENABLE is active, then SCANCLK[0:m-1] was sourced directly from SCANCLK_IN to enable test functions to proceed as normal. If the SYSTEM_TESTENABLE signal is inactive and CONTROL signals are in the state that enables the data storing process, then SCANCLK[0:m-1] are controlled by the master controller 102 to operate at a desired speed at which the system is set up to operate. SCANCLK[0:m-1] are active one at a time to enable one chain in the design to be unloaded at a time.

Please replace the first full paragraph beginning on Page 8 with the following:

Note that the scan chain 200 is partitioned into the segments 228, 230, 232, and 234. Each segment is shown to have ~~four~~ five master-slave latches connected in series. The number of segments in the scan chain and the number of latches in each segment may vary depending on the particular implementation without departing from the spirit of the present invention.

Please replace the first full paragraph beginning on Page 11 with the following:

At the start of the segments 230, 232, and 234, the SCAN_IN port to the first latch is multiplexed by the multiplexers 236, 238, and 240, respectively, so that the respective multiplexers each either scans the SCAN_IN port into the first latch or the output of the last latch of the previous segment. The selection is done via the TEST_EN port 208. If the chip is in test mode, the TEST_EN signal is active. In[in] this case, the multiplexers 236, 238, and 240 will select the SCAN_IN port fed into the corresponding first latch of the segments 230, 232, and 234, respectively.

Please replace the first full paragraph beginning on Page 18 with the following:

A method and an apparatus are provided for reducing scan power consumption when unloading and restoring content of a processor. The processor has one or more scan chains. First, at least one scan chain is partitioned into a plurality of segments comprising one or more segments of a predetermined length and an offset segment. ~~Second, one of the segments is scanned at a time.~~ Enough clocking is provided to scan all bits in the plurality of segments. The processor keeps track of the predetermined length, an order of the segments, and the offset segment. All of the plurality of segments are scanned one segment at a time.